

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-42 are pending, Claims 1, 2, 9, 6-10, 13-18, 20, 22, 23, 27-31, 34-39, and 41 having been amended by way of the present amendment.

In the outstanding Office Action, Claims 6-9, 13-21, 27-30 and 34-42 were objected to as being in improper multiple dependent form; Claims 1-5 and 22-26 were rejected as being anticipated by MacNamee (U.S. Patent No. 5,212,684); Claims 1-2, and 22-23 were rejected as being anticipated by Almgren (U.S. Patent No. 6,212,384); and Claims 10-12 and 31-33 were rejected as being anticipated by Widegren (U.S. Patent No. 6,374,112).

In reply, the claims objected to as being in improper multiple dependent form have been amended consistent with U.S. claim drafting practice. It is believed that all of the claims, as amended, are suitable for being examined on the merits.

Independent Claim 1 has been amended to define a handover control method that switches a radio base station serving as a communicating counterpart to a mobile station. This method includes a step of detecting that the radio base station fails to provide a predetermined minimum bandwidth for said mobile station due to increasing a shortage of radio resources. The method also includes a step of switching the communicating counterpart of the mobile station from the radio base station to another radio base station in response to the detection made in the detecting step. Claim 22, a system claim, has been amended consistent with Claim 1.

Claim 2 has been amended to define a handover control method that switches a radio base station serving as a communicating counterpart of a mobile station. The method includes detecting that the mobile station becomes incapable of communicating by using the predetermined minimum bandwidth. The method also includes selecting one or more radio

base stations based on the transmission capacity of the radio base stations such that a totality of the one or more radio base stations provides a total data transmission capacity satisfying the predetermined minimum bandwidth. The method also includes a step of switching the communicating counterpart of the mobile station from the radio base station to said one or more base stations in response to the detection in the detecting step so that the mobile station communicates with one or more base stations simultaneously. Claims 10, 23 and 31 have similarly been amended.

MacNamee describes a process of performing a handover in response to a drop in a signal level or quality of a signal monitored by a mobile terminal. The drop of the signal level or quality occurs when the channel is corrupted by interference (see, e.g., col. 10, lines 38-39).

Comparing MacNamee to amended Claim 1, amended Claim 1 first detects that a radio base station fails to provide a predetermined bandwidth for a mobile station due to an increasing shortage of resources. In contrast, MacNamee responds to a drop in signal level or quality of a signal monitored by the mobile terminal, but does not detect that the radio base station fails to provide a minimum bandwidth for a mobile station due to increasing shortage of resources. Accordingly, it is respectfully submitted that amended Claim 1 patentably defines over MacNamee. Although of differing statutory class and/or scope, it is respectfully submitted that Claim 22, as well as the claims that depend from Claims 1 and 22 respectively, also patentably define over MacNamee for substantially the same reasons provided above for Claim 1.

With regard to amended Claim 2, amended Claim 2 requires a step of selecting one or more radio base stations based on a transmission capacity of the radio base stations such that a totality of one or more radio base stations provide a total data transmission capacity satisfying the predetermined minimum bandwidth. In contrast, MacNamee neither teaches

nor suggests selecting one or more radio base stations and performing the handover so as to have a mobile station communicate with one or more base stations simultaneously (compare this absence in the teachings in MacNamee with the last element of Claim 2, which requires the mobile station to communicate with one or more base stations simultaneously). Although of different statutory class and/or scope, it is respectfully submitted that Claims 10, 23 and 31, as amended, as well as the respective dependent claims that respectively depend from Claims 2, 10, 23 and 31 also patentably define over MacNamee for at least these same reasons discussed above with regard to amended Claim 2.

Almgren describes performing a handover in response to a drop in measured signal quality (e.g., signal strength and bit error rate). This is not unlike the conventional handover system as discussed in the background section of the present patent specification (see, e.g., last paragraph at page 4). In this conventional approach, a handover is triggered in response to the measured signal quality such as signal strength and interference. The invention of Claim 1 and 22 distinguishes such conventional technology in that handover is performed upon the detection that a radio base station fails to provide a predetermined minimum bandwidth for a mobile station due to increasing shortage of resources. Thus, it is respectfully submitted that the invention defined by amended Claim 1, and 22, as well as the claims that depend therefrom, patentably define over Almgren.


Likewise, Almgren neither teaches nor suggests selecting one or more radio base stations and performing handover so as to have a mobile station communicate with the one or more base stations simultaneously. Thus, Almgren neither teaches nor suggests all of the features of independent Claims 2, 10, 23 and 31, as well as the claims that depend therefrom. Accordingly, it is respectfully submitted that the invention defined by Claims 1-2 and 22-23, as amended, patentably define over Almgren.

Claims 10-12, and 31-33 are rejected as being anticipated by Widegren. However, the basis of this rejection is the assertion in the Office Action that switching to one or more radio base stations is disclosed at col. 11, lines 31-41. However, when properly understood in the context of Widegren's teachings, this portion of Widegren merely states that the connection is point-to-point, point-to-multipoint, or broadcast. Moreover, this teaching simply refers to the type of connection of a network that is a fixed configuration, and has nothing to do with a change in the number of base stations before and after a handover. Accordingly, it is respectfully submitted that Widegren neither teaches nor suggests the feature of selecting one or more radio base stations and performing handover so as to have a mobile station communicate with the one or more base stations simultaneously, as required by Claims 10-12 and 31-33, as amended.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-42, as amended, is patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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